

REMARKS

The above amendments and these remarks are responsive to the Office action dated November 2, 2004. Claims 1-16 are pending in the application. Claims 1-16 are rejected. By way of the present amendment, claims 1-4, 7, 8, 11, and 12 are amended, and new claim 17 is added. In view of the amendments above, and the remarks below, applicant respectfully requests reconsideration of the rejected claims under 37 C.F.R. § 1.111.

Rejections under 35 USC § 112

Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, the Examiner suggests that in claim 1 at line 10, the phrase “the stationary discharge” lacks antecedent basis. Applicants have amended claim 1 to provide antecedent basis for the phrase “stationary discharge”.

The Examiner suggests that at claim 4 at line 4, the phrase “said trigger capacitors” lacks antecedent basis. Applicants have amended claim 4 to recite a single trigger capacitor.

The Examiner suggests that at claim 7, line 3, “the capacitors” lacks antecedent basis. Applicants have amended claim 7 to provide antecedent basis for the capacitors.

The Examiner suggests that at claim 8, line 2, “capacitors” lacks antecedent basis. Applicants have amended claim 8 to provide an antecedent basis for the capacitors.

The Examiner suggests that claims 2-10 are vague by virtue of their dependency on claim 1. As claim 1 has been amended as set out above, Applicants suggest that claims 2-10 are no longer vague by virtue of depending from claim 1.

The Examiner suggests that at claim 11, lines 7, 8, the phrase “the input” and “output” lack antecedent basis; at line 11, the phrase “the discharge” lacks antecedent basis; at line 13, the phrase “the stationary output voltage” lacks antecedent basis, at line 14, the phrase “the stationary discharge” lacks antecedent basis, and that at line 15, the phrase “said discharge source” lacks antecedent basis. Applicants have amended claim 11, and suggest that as amended, claim 11 includes proper antecedent basis for each claim element therein.

The Examiner suggests that at claim 12, line 3, the phrase “the cathode” lacks antecedent basis. Applicants have amended claim 12 to provide antecedent basis for the cathode.

The Examiner suggests that claims 12-16 are vague by virtue of their dependency on claim 11. As claim 11 has been amended as set out above, Applicants suggest that claims 12-16 are no longer vague by virtue of depending from claim 11.

In view of the above amendments and remarks, Applicants suggest that claims 1-16 particularly and definitely define the claimed subject matter, and request withdrawal of the rejection of those claims under 35 U.S.C. § 112, second paragraph.

Rejections under 35 USC § 102

Claims 1-3 are rejected under 35 U.S.C. § 102(e) as being anticipated by Blom et al. (U.S. Patent No. 6,437,994). In particular, the Examiner suggests that Blom discloses a discharge power supply apparatus as set out in instant claim 1. Applicants traverse the rejection.

As shown in Figs. 1A and 1b, Blom et al. disclose an inverter circuit 1 and a full-wave rectifier circuit 12 which includes the diodes 13 to 16, and supplies direct current voltage to a discharge load connected to terminals 20 and 21. A filter capacitor 17 is connected in parallel to the rectifier circuit 12 (as shown in Fig. 1B, and set out at col. 5, lines 58-64 of Blom et al.) Applicants note that filter capacitor 17 serves to smooth the direct current voltage applied to terminals 20 and 21. Applicants further note that no capacitor is disclosed as separately provided connected in parallel to any of diodes 13 to 16, respectively, also as shown in Fig. 1b.

The Examiner suggests that filter capacitor 17 of Blom et al. is equivalent to the trigger capacitor of the present invention. Applicants respectfully disagree, and note that as claimed in claim 1 and with reference to instant Fig. 1, a trigger capacitor (7) is separately connected in parallel to at least one of the diodes (4A to 4D) of the full-wave rectifier circuit (4) in order to store a charged voltage (E). That is, the trigger capacitor is connected to at least one of the diodes solely as shown in, for instance, Fig. 1. In this way, the charged voltage stored in the trigger capacitor is superimposed on the direct current voltage of the rectifier circuit (4) to generate a trigger voltage in order to initiate

the discharge of the load (also as set out in the specification at page 11, lines 2-22). This structural feature makes it possible to discharge the load with high reliability using a simple circuit configuration and a simple control.

In order to anticipate a claim, a single reference must disclose each and every element as set forth in the claim. In this case the filter capacitor 17 of Blom et al. is not "separately connected in parallel to at least one of" the diodes of the full-wave rectifier circuit. Blom et al. fails to disclose a discharge power supply apparatus as claimed in claim 1, and in particular fails to disclose the trigger capacitor set out in claim 1. Rather, Blom et al. merely disclose a conventional discharge power supply apparatus as shown in instant Fig. 13. As Blom et al. fail to disclose the subject matter of claim 1, Blom et al. fails to anticipate the invention of claim 1. As claims 2 and 3 depend from claim 1, Applicants suggest that claims 1-3 are not anticipated by Blom et al., and respectfully request the withdrawal of the rejection of claims 1-3 under 35 U.S.C. § 102.

Allowable Subject Matter

The Examiner indicates that claims 5, 6, 9, and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Examiner indicates that claims 4, 7, and 8 would be allowable if rewritten to overcome the cited rejections under 35 U.S.C. § 112, second paragraph, and to include all of the limitations of the base claim and any intervening claims. Applicants appreciate the

indication of allowable subject matter, and in view of the above amendments and remarks, suggest that each of claims 1-10 are in condition for allowance.

The Examiner indicates that claims 11-16 would be allowable if rewritten to overcome the cited rejections under 35 U.S.C. § 112, second paragraph. Applicants appreciate the indication of allowable subject matter, and in view of the above amendments and remarks, suggest that each of claims 11-16 are in condition for allowance.

New Claim

Applicants take this opportunity to add new claim 17, directed to a discharge power supply apparatus according to claim 1 that further comprises a capacitor connected in parallel to the output of said full-wave rectifier circuit. Support for the amendment may be found at Fig. 1 of the instant application, particularly with respect to smoothing capacitor 5. and generally in the specification as filed.

Applicants respectfully suggest the claims are in condition for allowance, and respectfully request a Notice of Allowability be issued. If there are any questions relating to this paper, or the application as a whole, the Examiner is encouraged to contact the undersigned so that allowance of the claims may be facilitated.

The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 11-1540.

CERTIFICATE OF MAILING

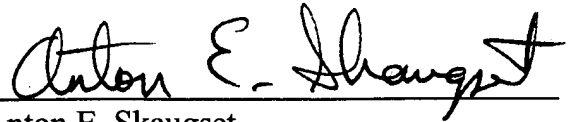
I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on March 1, 2005..



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